Amendments to the Claims

This listing of claims replaces all prior versions and listings of the claims in the application.

Listing of Claims:

1. (Currently amended) An actuator assembly comprising: a body portion, at least one actuator arm extending from the body portion, and a damping assembly configured to suppress a torsional vibration mode of the body portion, said vibration mode determined prior to attachment of the damping assembly to the body portion.

~~an actuator block including a body portion and at least one actuator arm extending from the body portion of the actuator block and the body portion including a damping assembly coupled to the body portion.~~

2. (Currently amended) The actuator assembly of claim 1 wherein the damping assembly ~~includes~~ comprises at least one viscoelastic damping layer.

3. (Currently amended) The actuator assembly of claim 1 wherein the damping assembly ~~includes~~ comprises at least one rigid body ~~coupled~~ attached to the body portion ~~of the actuator block~~.

4. (Currently amended) The actuator assembly of claim 1 wherein the damping assembly ~~includes~~ comprises a first rigid body, a second rigid body and a viscoelastic damping layer.

5. (Currently amended) The actuator assembly of claim ~~1~~ 4 wherein the viscoelastic damping layer is interposed between the first and second rigid bodies.

6. (Currently amended) The actuator assembly of claim 1 wherein the body portion is configured for rotation about an actuator axis, wherein the body portion comprises opposing first and second ends along said axis, and wherein the damping assembly is positioned so as to be adjacent the first end. ~~includes an elongate dimension between opposed ends and the damping assembly is positioned proximate to the first end spaced from the second end.~~

7. (Currently amended) The actuator assembly of claim 1 wherein the body portion is rotatable about an actuator axis and wherein the damping assembly adds an asymmetric mass to the actuator assembly with respect to said axis. ~~and further including a drive assembly coupled to the actuator block and the damping assembly being spaced from the drive assembly.~~

8. (Currently amended) The actuator assembly of claim 1 wherein the body portion ~~includes~~ comprises a window opened to an inner void of the ~~actuator~~ body portion opposite the at least one actuator arm, and wherein the damping assembly ~~includes~~ comprises a rigid body having a width sized to seat in the window ~~of the actuator body~~.

9. (Currently amended) The actuator assembly of claim 8 wherein the damping assembly ~~includes~~ comprises first and second rigid bodies and a damping layer and the first rigid body is sized to fit in the window and the second rigid body is wider than the window.

10. (Currently amended) The actuator assembly of claim 1 further comprising a data transducer supported by the at least one actuator arm. ~~2 wherein the rigid body is removably coupled to the body portion of the actuator block.~~

11. (Currently amended) A servo writing apparatus comprising:

a spindle assembly; and

an actuator assembly comprising a body portion, at least one actuator arm extending from the body portion toward said spindle assembly, and a damping assembly supported by the body portion and configured to suppress a torsional vibration mode of the actuator assembly determined prior to attachment of the damping assembly to the body portion.

~~a servo writer assembly including an actuator assembly having a plurality heads coupled to a plurality of actuator arms extending from an actuator body and the actuator body including a damper assembly.~~

12. (Currently amended) The servo writing apparatus of claim 11 wherein the damping assembly ~~includes~~ comprises a rigid body or block.

13. (Currently amended) The servo writing apparatus of claim 11 wherein the actuator block ~~includes~~ comprises a window opened to a cavity or void of the ~~actuator~~ body portion and the damping assembly ~~includes~~ comprises at least one rigid block disposed in the window ~~of the actuator body~~.

14. (Currently amended) The servo writing apparatus of claim 11 wherein the body portion is configured for rotation about an actuator axis, wherein the body portion comprises opposing first and second ends along said axis, and wherein the damping assembly is positioned so as to be closer to the first end as compared to the second end. ~~actuator assembly includes a drive assembly and the actuator body includes a proximal end coupled to the drive assembly and a distal end cantilevered therefrom and the damper assembly is positioned proximate to the distal end of the actuator body.~~

15. (Currently amended) The servo writing apparatus of claim 11 wherein the actuator assembly further comprises a data transducer supported by the at least one actuator arm. ~~12 wherein the rigid block or body is removably coupled to the actuator body.~~

16. (Currently amended) A method comprising the steps of:

providing an actuator assembly comprising a body portion from which at least one actuator arm extends ~~including an actuator body having a plurality of actuator arms extending therefrom~~;

~~measuring~~ determining a torsional vibration mode of the body portion ~~to provide a vibration profile of the actuator body in response to actuation thereof~~; and

~~providing~~ attaching a damping assembly to the body portion to suppress said torsional vibration mode ~~to control vibration modes of the actuator body~~.

17. (Currently amended) The method of claim 16 wherein the body portion is configured for rotation about an actuator axis, wherein the body portion comprises opposing first and second ends along said axis, and wherein the damping assembly is positioned so as to be adjacent the first end. ~~wherein the damping assembly is designed to control vibration modes in response to the vibration profile of the actuator body.~~

18. (Currently amended) The method of claim 16 wherein the body portion is rotatable about an actuator axis and wherein the damping assembly adds an asymmetric mass to the actuator assembly with respect to said axis. ~~wherein the damping assembly is designed to control a torsion vibration mode of the actuator body.~~

19. (Currently amended) The method of claim 16 wherein the determining step comprises a step of measuring vibration at spaced positions along the actuator body and along the at least one actuator arm. ~~step of providing a vibration profile comprises the step of:~~

~~measuring vibration at spaced positions on the actuator body using an array of sensors on the actuator body.~~

Claim 20 (Cancelled).

21. (New) An actuator assembly comprising a body portion, at least one actuator arm extending from the body portion, and a damping assembly supported by the body portion, said actuator assembly formed by a process comprising steps of providing said actuator assembly, determining a torsional vibration mode of the body portion, and attaching the damping assembly to the body portion to suppress said torsional vibration mode.

22. (New) The actuator assembly of claim 21 wherein the damping assembly comprises at least one viscoelastic damping layer.

23. (New) The actuator assembly of claim 21 wherein the body portion is configured for rotation about an actuator axis, wherein the body portion comprises opposing first and second ends along said axis, and wherein the damping assembly is positioned so as to be closer to the first end as compared to the second end.

24. (New) The actuator assembly of claim 21 wherein the body portion is rotatable about an actuator axis and wherein the damping assembly adds an asymmetric mass to the actuator assembly with respect to said axis.

25. (New) The actuator assembly of claim 21 further comprising a data transducer supported by the at least one actuator arm.